

## Allied Paper

## Meeting

Taken on: November 19, 2015

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ALLIED PAPER/PORTAGE CREEK/KALAMAZOO RIVER  
SUPERFUND SITE - PROPOSED CLEANUP PLAN

PRESENTATION AND PUBLIC COMMENTS

Held at the Washington Writers' Academy  
1919 Portage Street, Kalamazoo, Michigan  
Thursday, November 19, 2015, at 6:00 p.m.

Presenter: Michael Berkoff, U.S. EPA Remedial Project  
Manager

Coordinator: Diane Russell, U.S. EPA Community  
Involvement Coordinator

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<p>1 (Public Hearing, November 19th, 2015, 6:00 p.m.)</p> <p>2 MS. RUSSELL: All right. I want to be</p> <p>3 respectful of your time so we're going to get</p> <p>4 started. We do have a few other folks signing in</p> <p>5 but we have some housekeeping things. Before we</p> <p>6 get into the presentation, and especially before</p> <p>7 we kick off, I just wanted to say thank you for</p> <p>8 coming out tonight -- a lot of familiar faces,</p> <p>9 it's great to see many of you again. This is a</p> <p>10 place that we've been waiting to come to for a</p> <p>11 long time and so this is a milestone moment and</p> <p>12 we're glad that you could share that with us.</p> <p>13 So tonight we are holding our proposed</p> <p>14 plan meeting; that's the purpose of tonight's</p> <p>15 meeting, and is for the Allied Paper Landfill,</p> <p>16 which is part of the Kalamazoo River Superfund</p> <p>17 Site. And I have some of these fact sheets --</p> <p>18 many of you may have received these in the mail --</p> <p>19 and they might be things to hold on to because of</p> <p>20 the many points as Michael goes through his</p> <p>21 presentation might be nice to have, not only the</p> <p>22 visual up here but also something you can</p> <p>23 reference in your hand. So that's what this is on</p> <p>24 and we also have an agenda I set out for many of</p>	<p>1 it on any paper you desire if you'd like to put it</p> <p>2 in word and send it to me. And we're taking those</p> <p>3 through December 1st. Postmark and send it to me</p> <p>4 in the mail postmarked by December 1st.</p> <p>5 Okay, so before we get going and, again,</p> <p>6 for the purposes of the court reporter, if you</p> <p>7 could please take this opportunity to silence your</p> <p>8 cell phones and pagers, if any of you have</p> <p>9 pagers. All right. So for the agenda, we're just</p> <p>10 going to do a brief welcome and introductions and</p> <p>11 we've kind of covered part of this already, and</p> <p>12 then we're going to get into the presentation.</p> <p>13 Again, a lot of familiar faces here. You've</p> <p>14 probably seen a lot of these slides before, but</p> <p>15 maybe there are some new ones in there to keep</p> <p>16 things exciting.</p> <p>17 And then we'll have a question-and-answer</p> <p>18 portion of the meeting and that will be a chance</p> <p>19 for us -- if you have questions about the proposed</p> <p>20 plan, for us to answer. And that's the best time</p> <p>21 to really get your questions answered because</p> <p>22 during the public comment portion we will not be</p> <p>23 responding to any questions at that time. So</p> <p>24 perfect time to get the back and forth in before</p>
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<p>1 you. And I'm going over that in a moment but I</p> <p>2 thought this is going to basically break down how</p> <p>3 the evening is going to go.</p> <p>4 I will say that on this agenda you'll</p> <p>5 notice that there's a break point. We are going</p> <p>6 to take a five-minute break before we make formal</p> <p>7 public comments and those comments are going to be</p> <p>8 recorded into record. We have with us a court</p> <p>9 reporter, who is going to be recording everything</p> <p>10 this evening. So please just be aware that we're</p> <p>11 recording this and that when you speak and ask</p> <p>12 questions and when we get to the verbal comments,</p> <p>13 if you could state and spell your name for the</p> <p>14 court reporter, and speak as clearly as you can so</p> <p>15 that we get that all on record.</p> <p>16 Once we start the public comment portion,</p> <p>17 and I'll reiterate this again, just so we give</p> <p>18 everyone a chance to speak, if you could keep your</p> <p>19 comments brief and under five minutes -- I'll be</p> <p>20 kind of keeping track and give you a little nudge</p> <p>21 when it's getting near there.</p> <p>22 And also -- you can always also turn in</p> <p>23 written comments and this written form is included</p> <p>24 in the fact sheet, but of course you could provide</p>	<p>1 we take the break and then do the public comments.</p> <p>2 If you want to make a public comment</p> <p>3 tonight, I encourage you, if you haven't already,</p> <p>4 pick up one of these numbered cards; it's really</p> <p>5 just a manner for me to make sure on the</p> <p>6 transcript we get your name right, as well as keep</p> <p>7 an orderly fashion. Once we take a break, I'm</p> <p>8 going to set up a microphone in the middle aisle</p> <p>9 here and when I call your name you can just come</p> <p>10 up to the mic and provide your verbal comment for</p> <p>11 the court reporter. To stay on track with</p> <p>12 tonight's agenda, I'm going to go ahead and do</p> <p>13 introductions.</p> <p>14 First, I'll introduce myself. I'm Diane</p> <p>15 Russell, I'm EPA's Community Involvement</p> <p>16 Coordinator for this site. I work out of the</p> <p>17 EPA's Saginaw office. And then we also have</p> <p>18 Michael Berkoff, who is EPA's Project Manager for</p> <p>19 Allied Landfill and we also have Jim Saric here</p> <p>20 who is also the EPA Project Manager for the</p> <p>21 Superfund site. We have Paul Bucholz, who is with</p> <p>22 Michigan Department of Environmental Quality and</p> <p>23 we have a few smatterings of other EPA and MDEQ</p> <p>24 folks, but these are the important people of the</p>

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<p>1 evening.</p> <p>2 With that -- so part of the process when</p> <p>3 we get into cleanup for the EPA, is we have a</p> <p>4 public comment process and this is really what</p> <p>5 tonight is all about. We're in a place where</p> <p>6 we've come out with some -- we've looked at all</p> <p>7 alternatives and options of what we can do with</p> <p>8 the Allied Landfill Site and we took a look at</p> <p>9 each one of those, and EPA proposed a cleanup</p> <p>10 plan.</p> <p>11 We didn't pick it; we can't do that,</p> <p>12 because we have to have the public's input, the</p> <p>13 community's input. And that's really what this is</p> <p>14 all about and the public comment period that we</p> <p>15 have -- we have to do a 60-day public comment that</p> <p>16 ends on December 1.</p> <p>17 So tonight is an important step in this</p> <p>18 process with this public meeting and once we get</p> <p>19 through the public comment process there are other</p> <p>20 steps we go through as well, which I'll highlight</p> <p>21 towards the end here of the meeting tonight on how</p> <p>22 we review that and what that comes out to be. And</p> <p>23 then when we get to the point where we actually</p> <p>24 make a decision and say what definitively we're</p>	<p>1 of the landfill is, where the waste resides.</p> <p>2 We talk about the Bryant Historic</p> <p>3 Residual Watering Lagoons -- the former residual</p> <p>4 watering lagoons -- and the Monarch Historic</p> <p>5 Residual Watering Lagoons and that was across</p> <p>6 Portage Creek. Nestled in the middle of this</p> <p>7 property is the Panelyte Property, which is not a</p> <p>8 part of the site, just south of Alcott Street.</p> <p>9 This way's north.</p> <p>10 So here's another view of the Allied</p> <p>11 Landfill. What's different in this figure that</p> <p>12 I'm showing you in gray, is the extent of</p> <p>13 residuals; that's the paper waste which is</p> <p>14 contaminated with PCBs. This was investigated</p> <p>15 under remedial investigation and MDEQ led this</p> <p>16 study and delineated the extent of it. You can</p> <p>17 see it here.</p> <p>18 The reason why I'm pointing out the</p> <p>19 residuals here is because the PCBs are bound to</p> <p>20 residuals and that's based upon the data we've</p> <p>21 seen in remedial investigation, which we'll talk a</p> <p>22 little about. Before we got to this date, before</p> <p>23 we even did our remedial investigation, there was</p> <p>24 some work done at Allied Landfill, some of the</p>
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<p>1 going to go with. So with that process, I'm going</p> <p>2 to turn it over to Michael and he's going to go</p> <p>3 through the details of the proposed plan and to</p> <p>4 share with you. Michael.</p> <p>5 MR. BERKOFF: Thank you, Diane. Thank</p> <p>6 you also for pointing that out to me. Thank you.</p> <p>7 Thank you also for coming here tonight and for all</p> <p>8 of the other nights you've joined us in our other</p> <p>9 events along the way here. I appreciate your</p> <p>10 participation throughout this process and I just</p> <p>11 want to thank you.</p> <p>12 So this is the proposed plan for the</p> <p>13 Allied Landfill. What you're seeing in front of</p> <p>14 you now is the entire Kalamazoo River Superfund</p> <p>15 Site, which includes the river, a couple of paper</p> <p>16 mills and four landfills. You can see Allied</p> <p>17 there in the orange; it's the fourth of the four</p> <p>18 landfills.</p> <p>19 The other three ones: 12th Street</p> <p>20 Landfill, King Highway Landfill, and Willow Blvd.</p> <p>21 A-Site Landfill all have remedies in place.</p> <p>22 Here's a map of Allied Landfill showing us some of</p> <p>23 the squares on it. I want to point out towards</p> <p>24 your right-hand side there is where the main body</p>	<p>1 preliminary cleanup work, early cleanup work</p> <p>2 there.</p> <p>3 There was a time-critical removal action</p> <p>4 at Bryant Mill Pond. So this area in kind of a</p> <p>5 tan-yellow right here is where there was waste</p> <p>6 historically and that was removed during the</p> <p>7 Bryant Mill Pond removal action where 146,000</p> <p>8 cubic yards was taken out of the Portage Creek and</p> <p>9 put into the main body of the landfill over here.</p> <p>10 That excavation was done in the dry and</p> <p>11 we were able to get down to less than one part per</p> <p>12 million, almost the entire area. The peer piece</p> <p>13 that was from Millennium Holdings -- there are</p> <p>14 some comparisons gone, went bankrupt. We followed</p> <p>15 that time-critical removal action with some</p> <p>16 interim remedial measures that included putting in</p> <p>17 a sheetpile wall around the main body of the</p> <p>18 landfill that stopped it from getting back into</p> <p>19 the Portage Creek. It also included putting caps</p> <p>20 over some of the area and installing a groundwater</p> <p>21 collection system. The purpose of the system was</p> <p>22 to stop groundwater from mounding behind the</p> <p>23 sheetpile wall.</p> <p>24 So after these activities, there were</p>

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<p>1 some remedial investigations that looked at why is 2 a cleanup necessary and that was in a document 3 authored by The Michigan Department of 4 Environmental Equality. EPA approved it in 2008, 5 and it looked at a number of things; it developed 6 a conceptual site model. One of the major points 7 was that the PCBs are bound to the residuals. We 8 expect that based upon what we know of PCBs, they 9 want to bind to organic material and they 10 certainly have a lot of it there at the site in 11 the form of paper residuals. And that's backed up 12 also by our investigation, too.</p> <p>13 And we look at our soil data with a look 14 at the PCBs. Even with paper residuals, we don't 15 see it in the soil right next to residuals. 16 Additionally, we also look at the groundwater 17 data. We see that the PCBs are not detected in 18 groundwater when we're looking outside the waste. 19 One of the other points made in the 20 conceptual site model is as far as groundwater. 21 The reason why groundwater has gotten a lot of 22 attention at this site is that groundwater is 23 influenced by Portage Creek, flows towards Portage 24 Creek. And most importantly here is that it's not</p>	<p>1 kind of flows laterally towards Portage Creek here 2 and as it approached Portage Creek it comes from 3 further down closer to the surface towards Portage 4 Creek.</p> <p>5 So the key is upward gradient and not 6 downward towards the city well field. Some of the 7 exposures that we see then at the landfill itself, 8 the risk would be erosion and runoff of 9 contaminated material in areas that are not capped 10 and this will pose a risk for erosion runoff. 11 When it does so, it could impact the fish and then 12 consumers of fish. Further, uncapped residuals, 13 exposed residuals could pose a risk of direct 14 contact with people on the landfill.</p> <p>15 So looking at the PCBs here and looking 16 at the exposures here, we could look at a variety 17 of medium, that means soil, sediments, 18 groundwater. We looked at different kinds of 19 exposure scenarios, exposure to people, exposure 20 to animals and came up with a number of cleanup 21 alternatives -- or cleanup numbers, sorry -- soil 22 numbers, sediment, groundwater.</p> <p>23 We also acknowledge that we know that 24 where we have the residuals, we have the PCBs.</p>
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<p>1 flowing towards the city well field, dropping down 2 and flowing towards the city well field.</p> <p>3 So based on this, it may not pose a risk 4 to the groundwater or city well field, groundwater 5 may not be impacted, but there are still risks out 6 there that need to be addressed and cleanup is 7 still necessary.</p> <p>8 So the risks that were identified in the 9 remedial investigation are that consumption of 10 fish that have been impacted by PCBs, by the 11 residuals getting into Portage Creek pose a risk. 12 That certainly was the case before the Bryant Mill 13 Pond removal action and were things to get back 14 into Bryant -- into Portage through erosion 15 runoff, it would pose a risk again.</p> <p>16 So jumping down to the third one, erosion 17 and runoff of contaminated soil residuals could 18 purpose a risk again. Some of the residuals are 19 exposed where they currently are and so they pose 20 a risk of direct contact. So some of the concepts 21 of our conceptual site model are kind of visually 22 displayed to you. This is looking at the 23 groundwater that is captured by Portage Creek and 24 flows in that direction. You see that groundwater</p>	<p>1 PCBs are bound to these residuals so we use a 2 visual criteria for making our first crack at 3 excavation. If you can see the residuals, you can 4 use a visual indicator, excavate it, and see 5 whether or not we got it all that way.</p> <p>6 For the other contaminants at the site 7 that are not PCBs, what we're using as our cleanup 8 numbers are the generic Michigan numbers. After 9 approving of the Michigan's remedial investigation, 10 EPA ran a number of reports. In 2013, the 11 feasibility study for the site, the feasibility 12 study builds on the remedial investigation and 13 takes some of those risks I just talked about and 14 turns them into remedial action objectives. Those 15 are the objectives that every alternative has to 16 meet to be considered as one of the alternatives or 17 the goal of the cleanup for that.</p> <p>18 As a part of -- after developing these 19 remedial action objections, EPA also does an 20 evaluation of technologies looking at the different 21 ones to be applied to meet those remedial action 22 objectives. After we released the feasibility 23 study in 2013, the city asked us to take a pause 24 and to talk to them and talk to MDEQ and see if</p>

<p style="text-align: right;">Page 14</p> <p>1 there might be any other alternatives that we could 2 see about that might also address the contamination 3 at the site, meet the remedial action objectives, 4 and possibly be better than some of the ones we had 5 already concluded.</p> <p>6 So we did so. We started meeting with 7 the State of Michigan, with the City of Kalamazoo, 8 and talked to them about a couple of different ways 9 to look at this property and take a look at EPA's 10 cleanup process for this, too. Also, during this 11 time, the Michigan, State of Michigan asked us to 12 take another look at the groundwater data and we 13 did so. And then lastly, too, the City of 14 Kalamazoo also asked us to take another look at 15 different alternative remediation technologies and 16 see whether or not any of them would be applicable 17 here.</p> <p>18 EPA called on its national experts who 19 took a look at all the different emergent 20 technologies and to evaluate whether any would be 21 applicable here are at the Allied Site. Our 22 conclusion was that they're not. Due to the nature 23 of the waste site here, the PCBs are bound to the 24 waste and that although there are some intriguing</p>	<p style="text-align: right;">Page 16</p> <p>1 prevent contaminated waste material from impacting 2 ground and surface water.</p> <p>3 So we have these remedial action 4 objectives. We evaluate the technologies and come 5 up with an array of alternatives. Those 6 alternatives in order to be included in the 7 feasibility study have to meet professional 8 criteria of being protective and meeting EPA laws. 9 So that's how we get to our cut of what are the 10 alternatives that we have.</p> <p>11 Once we start comparing these 12 alternatives against each other, we look at some of 13 the balancing criteria -- we look at the balancing 14 criteria of the long-term effectiveness and 15 permanency of the remedy; whether or not it 16 produces toxicity through treatment; short-term 17 effectiveness; impenetrability; and 18 cost-effectiveness, and that comes from looking at 19 the cost and comparing it to the long-term 20 effectiveness, short-term impact, and the value 21 impact there. So the modifying criteria are state 22 and community acceptance.</p> <p>23 So including the addendum, the full array 24 of alternatives, EPA evaluated for the no-action</p>
<p style="text-align: right;">Page 15</p> <p>1 technologies for maybe other sites, they don't seem 2 to be applicable here at Allied Landfill.</p> <p>3 So in 2015, one of the things that we 4 were working on with the city while looking at 5 other alternatives, we put together an addendum to 6 the feasibility study and published it June of 7 2015. And that included this new alternative, 8 which includes that much larger pullback of the 9 waste and it brings in long-term storage. From the 10 groundwater study, the purpose of it, of the 11 groundwater study, was to support potential 12 development and long-term groundwater monitoring 13 network of the site. As part of it, we installed 14 additional deep wells, looking at some of the 15 groundwater, investigated and ultimately confirmed 16 the conceptual site model from the State of 17 Michigan's remedial investigation.</p> <p>18 So I mentioned a few moments ago the 19 remedial action objectives. So we're putting 20 together the alternatives as these three 21 objectives: to prevent direct contact, and that's 22 the first action objection; and the second one is 23 to prevent PCB contaminated materials from eroding 24 and getting into Portage Creek; and lastly, to</p>	<p style="text-align: right;">Page 17</p> <p>1 alternative, which is required in our analysis and 2 then an array of consolidation capping 3 alternatives. The first is 2A, which would leave 4 that Monarch hurdle where it is. Second one is 2B, 5 which would take Monarch over as its main body of 6 landfill. Then 2C, which is much like 2B, except 7 of the waste that's excavated. The most highly 8 contaminated would be sent off site for 9 incineration. I should say, too, in these three 10 consolidation capping alternatives, that the 11 alternatives would include a fence around the 12 landfill.</p> <p>13 In 2D, it's much like 2B, except for the 14 footprint would be much more consolidated. And 15 there would be long-term stewardship involved in 16 the remedy that would come in two ways; it would be 17 active-use of the capped area with some light 18 recreation, which would bring stewardship there. 19 And, also, the areas around the base of the 20 landfill that would be subject to excavation would 21 be then available for some kind of reuse with more 22 commercial/industrial uses, which would have an 23 effect on long-term stewardship there, too.</p> <p>24 The other alternatives are, No. 3,</p>

<p style="text-align: right;">Page 18</p> <p>1 removal and off-site disposal. After that removal 2 would be done, the main body of landfill would be 3 wetland. And then the last one is encapsulation 4 and long-term monitoring network; that would be 5 building containment cells on the property, 6 excavating material, putting down liner and putting 7 a backing and containment cells.</p> <p>8 Here are the costs, the estimated costs 9 of the remedies, the capital costs and how much it 10 would cost to build it, and then what we estimated 11 for the OEM costs. A lot of people have had 12 questions about an OEM costs, so this number here, 13 what it represents is if you take this money now, 14 put it in a bank account and have it earn interest, 15 that money in that bank account would be allocated 16 for paying for the estimated long-term --- or pay 17 for the upkeep long term. And so this then gives 18 us our total number over here.</p> <p>19 Some of you may be familiar with this 20 graphic from our fact sheet. It's a comparison of 21 the different alternatives against each other and 22 some of these are things we looked at in our 23 evaluation of the alternatives using the criteria. 24 I should note that we talked about the area</p>	<p style="text-align: right;">Page 20</p> <p>1 Also, by having this footprint reduced 2 and pulling waste away from Portage Creek, really 3 helps address that remedial action effectively. An 4 implementation for this remedy would be about three 5 years once we start the cleanup. Another way to 6 look at the remedy here is just another view of it 7 and it gives you an idea of what the work would 8 entail. The areas in brown would be subject to 9 excavation and this purple would be where the cap 10 would be.</p> <p>11 Now, the footprint we're showing here 12 does not look exactly like what the city had shown 13 in their presentation in February of this year, but 14 that doesn't mean that we can't get there 15 eventually. What it speaks to and I think what the 16 take-home message is there, is really that more 17 collaboration is necessary in the future. The city 18 has shown that maybe some of the waste can be put 19 at Panelyte. Given Panelyte, and EPA doesn't have 20 control over it -- but that might be possible 21 through further collaboration. I'm going to hand 22 it back to Diane.</p> <p>23 MS. RUSSELL: Thank you, Michael. All 24 right, so let's go back to this graphic from the</p>
<p style="text-align: right;">Page 19</p> <p>1 available for reuse; that's not one of the criteria 2 here, but certainly the long-term stewardship that 3 would occur at these areas is something that 4 factors into the long-term effectiveness in front 5 of us.</p> <p>6 We'll give you an opportunity to look at 7 this for a few little bit. You can see the 8 short-term impacts of truckloads going to the site 9 and leaving the site. Some of it bringing backfill 10 in green; leaving the site in orange. How much PCB 11 material would be managed?</p> <p>12 So ultimately when the EPA was looking at 13 these criteria, and is proposing alternative 2D, is 14 because the long-term effectiveness and permanence 15 of that remedy is heightened and we feel that is 16 enough to outweigh the other alternatives.</p> <p>17 So here's the proposed alternative; it's 18 consolidation capping of material with long-term 19 stewardship of the property. It would be done by 20 having a greatly reduced footprint, allowing for 21 reuse around the area or reuse on top and gaining 22 the stewardship that way. One of the remedial 23 action objections, as I said, was prevent waste 24 from getting into Portage Creek.</p>	<p style="text-align: right;">Page 21</p> <p>1 beginning, and basically I just want to highlight 2 the next steps here. And once we complete the 3 60-day public comment period, which we're in now, 4 and not only tonight providing your verbal 5 comments, but you could also provide that via mail.</p> <p>6 We also have a public comment form online 7 and all that information on where to access is in 8 this gray box on the fact sheet right towards the 9 bottom, public comment period, several ways to 10 offer comments. So if you don't feel like getting 11 out in the public tonight and voicing your concern, 12 you can certainly do that in writing or online in 13 the public comment form.</p> <p>14 So once we complete that 60-day public 15 comment period, EPA considers those comments and 16 records the responsiveness -- their responses in 17 the document that they called the responsiveness 18 summary. So that's where EPA consolidates the 19 comments they've gotten and responds to each one of 20 those comments in a way that addresses what those 21 were about. And then that responsiveness summary 22 will be included for public record and viewing 23 along with the record of decision which is expected 24 Winter/Spring of 2016.</p>

<p style="text-align: right;">Page 22</p> <p>1 So there's still a few steps to go even 2 after tonight. We've got the public comment 3 period, which is complete December 1 and then we go 4 to the next step of actually taking time to review 5 all of those comments and coming up with responses 6 to those, and then getting onto the record of 7 decision. 8 All right. So now we come to the portion 9 of the meeting where we are -- we'll take 10 questions. I just want to reiterate that this is 11 time to ask and interact. If you have -- and I know 12 that many of you have asked Michael questions 13 before, it's time to do that if you want to take 14 advantage of that now before we take our break, 15 because, again, we cannot respond during the public 16 comment portion. We will listen but we can't 17 respond to questions. 18 So now is the time -- and what we'll do 19 to make this so we can make sure that everyone's 20 questions are picked up by the court reporter, I'll 21 come around to you with a microphone and please 22 before you make your question, if you could state 23 your name for the court reporter that would be ever 24 so helpful. So with that, would anyone want to</p>	<p style="text-align: right;">Page 24</p> <p>1 we would have always discussed them in remedial 2 investigation, feasibility study providing cleanup 3 numbers for all of them. During any kind of 4 cleanup going on out there and confirmation there, 5 would be confirmation for those constituents, too. 6 Certainly they identify PCBs as the primary 7 constituents concerned, but we also characterize 8 the other constituents. We also have examples of 9 lead; we have chromium out there; mercury. We've 10 looked at all of those, we've tested those to see 11 if we have hazardous levels and we don't. So we 12 have investigated those in some of our other 13 documents. 14 MS. RUSSELL: I have this working again. 15 Sorry. Anyone else want to ask a question? I'm 16 going back here. State your name for the court 17 reporter, please. 18 MR. KORNHEISER: Ken K-o-r-n-h-e-i-s-e-r. 19 At the October 22 meeting there was a firm that 20 came forth called BioPath, they said they had some 21 kind of bio remediation. That was four weeks ago, 22 so this is a two-part question. One is, has there 23 been any change in EPA's assessment or interactions 24 with this company regarding the bio-remediation</p>
<p style="text-align: right;">Page 23</p> <p>1 start off with the questions portion of the 2 meeting? Raise your hand. All right. I'll come 3 over to you. Don't forget to state your name for 4 the court reporter, please. 5 MR. WHITESIDES: Romeo, Oscar, Bravo -- 6 THE COURT REPORTER: Just spell it, 7 please? Could you just spell it. I'm sorry. 8 MR. WHITESIDES: W-h-i-t-e-s-i-d-e-s. My 9 goal is to clean up, you say there are safe levels 10 of contamination that you must meet? 11 MR. BERKOFF: Yes. 12 MR. WHITESIDES: Unlisted and undisclosed 13 contaminants, at least in your presentation. I 14 know in the documentation there are long lists of 15 contaminants in addition to PCBs. 16 MR. BERKOFF: Yes. 17 SPEAKER: How does that fit with the 18 strictest interpretation that this site is 19 contaminated with PCBs and the rest of it is never 20 mentioned as part of the Superfund process, but yet 21 we're going to clean it up. Is that only as 22 incidental to PCB or is it specifically targeted? 23 MR. BERKOFF: I would say that those 24 other constituents are specifically targeted; that</p>	<p style="text-align: right;">Page 25</p> <p>1 process? And the second question would be, if that 2 is not considered, if it's not included in the 3 recommendation, the decision, is there still an 4 opportunity for that process to be introduced? 5 MR. BERKOFF: Thank you. So the question 6 is a -- Mick Warner is actually here tonight -- and 7 talked about BioPath, technology that his company 8 has and whether or not it would be a viable 9 technology at the landfill. I haven't heard 10 anything from Mick since then in that meeting and 11 the night before I had offered him the opportunity 12 to do a bench-scale study using waste from Allied 13 and haven't heard anything. 14 I have gone out and gotten a little bit 15 more information about BioPath, went onto their 16 website and haven't found anything that really 17 discusses their success stories, no studies that 18 show whether or not it's viable. That said, I'd be 19 happy to work with BioPath and see whether or not 20 the technology is viable for waste and Allied and 21 they're more than welcome to approach me, and as 22 far as moving forward, I think the first step is 23 really to figure out if it's a viable technology. 24 MR. KORNHEISER: So is that process still</p>



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1 available for utilization if there's a route that  
2 does not include it specifically?

3 MR. BERKOFF: You know, the circle  
4 process allows us to amend remedies if it's  
5 necessary. And certainly if there's a silver  
6 bullet out here that can address PCB contamination,  
7 we would want to utilize it if it's a viable  
8 alternative, but I think the first step really is  
9 to do a bench-scale study. And like I said, I'm  
10 very happy to facilitate that, calling on some of  
11 EPA's experts to make sure is a defensible study so  
12 that we can evaluate it appropriately.

13 MS. RUSSELL: We have a question here.

14 MR. FENSTERMAKER: Hagan Fenstermaker,  
15 H-a-g-a-n F-e-n-s-t-e-r-m-a-k-e-r. Could you  
16 discuss a little bit the difference in options 2C  
17 and 2D. Is the primary difference not shrinking  
18 the footprint of the primary landfill area outside  
19 of the removal incineration?

20 MR. BERKOFF: Well, The removal  
21 incineration is the considerable difference; it  
22 drives up the cost for alternative 2C because the  
23 facilities that can handle incineration, I think  
24 we've got one in Texas or Utah. So that would be

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1 -- that would really drive up the price compared to  
2 2D. But as far as differences between 2C and 2D,  
3 is that incineration component, the landfill is  
4 shrunk considerably in 2D. The fences would still  
5 be up in 2C. The fences would be down except for a  
6 small portion for a mechanicals and landfill gas  
7 collection system in 2D, that is. And then --  
8 those would be the primary differences.

9 MR. FENSTERMAKER: So that would be  
10 offsetting the cost of incineration at the  
11 remaining landfill --

12 MR. BERKOFF: Well, -- I'm sorry?

13 MR. FENSTERMAKER: -- significant  
14 differences reclaimed in 2D, but in 'C' you're  
15 actually proposing removing material so I'm just  
16 trying to figure out the difference --

17 MR. BERKOFF: Yes. The material would  
18 not be that large of an amount; it would be more  
19 like 10,000 cubic yards. And it's really the cost  
20 there, is purely for that transportation and then  
21 incineration. So I kind of look at it as more  
22 separate things; they are both building off of 2B,  
23 so when you go from 2B to 2C, you'll -- 43 million  
24 to 70 million and then when you go from 2B to 'D',

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1 you'll go from 43 million to 63 million.

2 MR. FENSTERMAKER: This flat square  
3 footage in 'C' is larger, I guess you'll have a  
4 higher height in 'D'; is that a fair statement?

5 MR. BERKOFF: We have a higher -- 'D', we  
6 have a higher pullback from the creek, which is a  
7 real positive there and then the stewardship that  
8 would come with reuse of the property adding to the  
9 long-term effectiveness for 2D.

10 MS. RUSSELL: All right. We have a  
11 question up here.

12 SPEAKER: George Magas, M-a-g-a-s. You  
13 said that you had to go to Texas to take the PCBs  
14 to incinerate. We have a major concentration of  
15 paper plants in Michigan, so why can't we get ahold  
16 of the company that builds those, build one of them  
17 here, give them a million dollar grant money to  
18 build a facility and we can burn all the PCBs  
19 throughout the and that will resolve the problem.  
20 I mean, I don't understand this. You guys, you  
21 want nuclear waste from out East and down in  
22 Florida all the way to Nevada; that's never going  
23 to happen. I mean it costs too much money to ship  
24 it from one part of the country to the other when

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1 we spent millions of dollars on these facilities  
2 that we're never going to use. I mean, the EPA is  
3 crazy.

4 MR. BERKOFF: Okay, thank you.

5 MS. RUSSELL: Question? I want to get  
6 everyone's comments and I want to take a couple  
7 more questions; we're open to do that. Otherwise  
8 we'll take a five-minute break. Any questions you  
9 wanted to get in at this point? Going once, twice.  
10 All right. Can we just take a brief five-minute  
11 break and we'll come back and we'll start the  
12 public comment portion. If you want to make a  
13 public comment, please grab a card and turn it in  
14 to me and they'll be at the registration desk and  
15 they look like this. And then go ahead and turn  
16 those in to me if you would.

17 (The hearing is recessed at 7:00 p.m.)

18 (The hearing is resumed at 7:05 p.m.)

19 MS. RUSSELL: Okay, we're going to get  
20 started with the public comment portion of the  
21 meeting. First, a few of the instructions. Please  
22 remember that this is your opportunity to provide  
23 comments, which will be recorded as part of the  
24 official record for this project. EPA will not be

<p style="text-align: right;">Page 30</p> <p>1 responding to comments or questions expressed</p> <p>2 during this portion of the meeting but the EPA will</p> <p>3 follow up with a responsiveness summary, with the</p> <p>4 meeting being made available to the public.</p> <p>5 If you turned in a card, I will call your</p> <p>6 name and come to the microphone at the front and</p> <p>7 state your comment. You don't have to worry about</p> <p>8 your name, I'm going to hand your names over to the</p> <p>9 court reporter so you don't have to worry about</p> <p>10 that.</p> <p>11 But do speak clearly so she can record</p> <p>12 that and note that only spoken words and not</p> <p>13 gestures will be recorded. And so that everybody</p> <p>14 will have a chance to speak please keep your</p> <p>15 comments brief. I'm going to kind of keep track</p> <p>16 and at the five-minute mark I will kind of -- you</p> <p>17 to allow some others to come forward. After this</p> <p>18 hearing, this meeting we'll be receiving a</p> <p>19 transcript of the meeting, the PowerPoint</p> <p>20 presentation, all the comments that you received</p> <p>21 tonight from our court reporter and we'll post</p> <p>22 those on our website.</p> <p>23 With that, I will get started with our</p> <p>24 first commenter and I'll ask you just to step</p>	<p style="text-align: right;">Page 32</p> <p>1 fed laboratory rats very large amounts of PCBs and</p> <p>2 the rats got liver cancer, but no other cancer.</p> <p>3 The EPA classified PCBs as probable human</p> <p>4 carcinogens with all of its extensive consequences</p> <p>5 mostly based on the 2nd study from 1975. Then a</p> <p>6 researcher in Germany, Dr. Ekkehard, repeated</p> <p>7 Dr. Kimbrough's work in 1984. They found that the</p> <p>8 treated rats got more liver tumors, but fewer</p> <p>9 tumors of other tissues, so that their overall</p> <p>10 cancer rate was lower and their survival rate</p> <p>11 better than for the untreated rats.</p> <p>12 There was a protective effect for cancers</p> <p>13 other than liver cancers. Later, Dr. Kimbrough</p> <p>14 became the director for Health and Risk</p> <p>15 Capabilities in the Office of the Administrator of</p> <p>16 the U.S. EPA in Washington, DC. She left the EPA</p> <p>17 in 1989 [sic] after only two years in this</p> <p>18 position.</p> <p>19 When I asked her why she resigned from</p> <p>20 this important and secure position, the answer was</p> <p>21 very short; it became political. When the chairman</p> <p>22 of General Electric asked her to evaluate the</p> <p>23 health of workers heavily exposed to PCBs in their</p> <p>24 work, she agreed and followed, with her coworkers,</p>
<p style="text-align: right;">Page 31</p> <p>1 forward to this microphone in the front aisle here.</p> <p>2 And our first commenter is Claus Globig.</p> <p>3 MR. GLOBIG: My name is Claus Globig,</p> <p>4 C-l-a-u-s G-l-o-b-i-g, and I'm an international</p> <p>5 consultant and I've lived in Kalamazoo for 54</p> <p>6 years. I'm a chemical and mechanical engineer and</p> <p>7 I have followed the PCB issue in the role of</p> <p>8 investigative reporter for the last 20 years. As a</p> <p>9 result, I can say today that the fence around the</p> <p>10 landfill could be removed tomorrow and the area</p> <p>11 developed without any harm to human or plant life</p> <p>12 as far as PCBs are concerned.</p> <p>13 The rationale for this conclusion is</p> <p>14 contained in a 35-page lecture, which I gave to</p> <p>15 Western Michigan University's engineering students,</p> <p>16 and also in an abbreviated open letter to the</p> <p>17 residents of Kalamazoo. In a nutshell, the history</p> <p>18 is as follows: A young medical director -- a</p> <p>19 medical doctor and pathologist, Renate Kimbrough,</p> <p>20 came from Germany and devoted her professional life</p> <p>21 to public health by working for the U.S. EPA and</p> <p>22 for the U.S. Department of Health, Education, and</p> <p>23 Welfare and later, again, for the U.S. EPA. In two</p> <p>24 studies from 1972 and 1975, she and her coworkers</p>	<p style="text-align: right;">Page 33</p> <p>1 the health of more than 7,000 workers for 34 years.</p> <p>2 The book was published in 1999 and later</p> <p>3 confirmed in 2003 with an update which concluded</p> <p>4 that PCBs do not cause cancer or any other serious</p> <p>5 illness in humans. In 2009, Dr. Robert Golden and</p> <p>6 Dr. Renate Kimbrough stated in a paper: The weight</p> <p>7 of evidence does not support a causal association</p> <p>8 to PCBs and human health, cancer. The dramatic</p> <p>9 differences between rodents and humans in</p> <p>10 sensitivity to PCB-mediated induction of CYP1A1</p> <p>11 gene, suggests that even occupational exposure to</p> <p>12 PCBs have never resulted in PCB body burdens</p> <p>13 approaching the levels required to initiate the</p> <p>14 sequence of events involved in the promotion of</p> <p>15 liver cancer in rodents.</p> <p>16 These comments explain why I have a</p> <p>17 problem with the U.S. EPA headquarters in</p> <p>18 Washington, DC. To prove a cause-and-effect</p> <p>19 relationship, one would have to demonstrate a</p> <p>20 pathway. Thank you.</p> <p>21 MS. RUSSELL: Thank you. We have Robert</p> <p>22 Whitesides.</p> <p>23 MR. WHITESIDES: My name is Robert</p> <p>24 Whitesides and it's still spelled the same. There</p>

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1 seems to be a conflation of the cost and funding.  
2 Cost is one of the balancing items of the nine  
3 goods, I believe. I'd say that because whenever I  
4 see the nine factors I think the little red book of  
5 something.

6 Funding is totally separate; it's not  
7 addressed by EPA in any of these decisions. What  
8 we do know is that there is funding established  
9 through the Chapter 11 process that Lyondell Basell  
10 went through. And I'd like everybody to become  
11 familiar with the document and I'll read it, but  
12 I've given the copies to the court reporter:

13 The United States' Memorandum in Support  
14 of Debtors Motion Pursuant to Fed R. BANKR.P.9109  
15 to Approve Settlement Agreement Among the Debtors,  
16 The Environmental Custodial Trustee -- or trust  
17 trustee, The United States, and Certain State  
18 Environmental Agencies.

19 This is what was hashed out over about  
20 six months between all of those characters,  
21 submitted to the court and the court approved it.  
22 It has a special reference on page 12, Section 7  
23 called the Kalamazoo Site and I will read it for  
24 clarity:

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1 Because most of the comments received by  
2 the United States pertain to the Kalamazoo site --  
3 most of us participated in those comments -- key  
4 items of the proposed settlement agreement  
5 applicable to that site are summarized separately  
6 here. Under the proposed settlement agreement, the  
7 Kalamazoo Site is addressed pursuant to the terms  
8 described above in connection with liquidated  
9 sites, settlement of the debtor's objections to the  
10 United States' proof of claim, and the  
11 Environmental Custodial Trust. More specifically,  
12 the proposed settlement agreement provides for  
13 three distinct settlement amounts for the Kalamazoo  
14 Site.

15 First, EPA will receive an allowed  
16 general unsecured claim of \$908,261,837 against  
17 debtor Millennium Holdings, LLC for the Kalamazoo  
18 Site, and DOI -- The Department of the Interior --  
19 and NOAA will receive an allowed general unsecured  
20 claim against Millennium Holdings of \$124,231,125  
21 for the site. And they referred to 'See Settlement  
22 Agreement', Sec. 4(a)(2).

23 Second, EPA will receive a cash payment  
24 of \$49,549,379 for the Kalamazoo Site as part of

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1 the settlement of litigation with the debtors  
2 concerning the dischargeability of injunctive  
3 environmental obligations and non-debtor owned  
4 property -- clarifying non-debtor owned property;  
5 that's the river, and they refer to Sec. 5(a)(2) of  
6 the agreement. Last, certain debtors will transfer  
7 \$53,721,850 in cash to the Environmental Custodial  
8 Trust to be used for the cleanup and restoration of  
9 the Allied Paper Mill property, a debtor-owned  
10 portion of the Kalamazoo Site known as Operable  
11 Unit One.

12 So what we have is specified in an  
13 agreement in bankruptcy court that there is 53  
14 million for the Allied Paper Mill property, a  
15 debtor-owned portion, and that is now under the  
16 control of the environmental trustee known as the  
17 LaPetamine 23, I believe, headquartered in Chicago.

18 The other money is for settlement of  
19 litigation for non-debtor owned property, which is  
20 the river itself. So I think this conflation of  
21 these two amounts into some \$100,000,000 has been  
22 dogging people for quite some time, but is  
23 specified in this agreement.

24 MS. RUSSELL: We have Jim Miller.

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1 MR. MILLER: Good evening, my name is Jim  
2 Miller and I'm president and founder of Catskill  
3 Remedial Contracting Services, an Otsego-based  
4 environmental contractor. I've been working in the  
5 environmental remediation business since 1972,  
6 including nine years with the Michigan Department  
7 of Natural Resources.

8 During that time, I spent a good deal of  
9 my time there administrating -- administering  
10 enforcement actions to facilitate the proper  
11 closure capping in operation landfills, public and  
12 private, in Michigan. I founded Catskill in 1995  
13 and we have since that time worked on about 200  
14 landfill projects throughout the Midwest. A local  
15 one that you might be familiar with is the capping  
16 of the KL Avenue Superfund Site Landfill with a  
17 company that a Mick Warner, who is here tonight,  
18 was with also. We continue to maintain that site  
19 since that time, since we capped it.

20 With my background, I'm familiar with all  
21 components of closing a landfill; regulatory  
22 compliance; the design and implementation of  
23 capping and closure; and post closure and long term  
24 operations and maintenance. With regard to the

<p style="text-align: right;">Page 38</p> <p>1 Allied Paper Landfill Site, I think it's preferable 2 and important to fully clean-close the site so that 3 the entire site can be reused, and I think it is 4 important that we use local labor and resources to 5 get us there. Because we are a local company, we 6 support complete cleanup and not just the Allied 7 Site but the entire river. 8       The plan that we are preparing to commit 9 to, to achieve total cleanup of the Allied Paper 10 Site, \$48,000,000 is \$15,000,000 less than the 11 EPA's estimate of 63 million, which will leave 15 12 million available for the cleanup of down river 13 contamination. 14       The plan for the Allied Landfill Site is 15 to use BioPath Solutions enzymatic dechlorination 16 process to eliminate PCBs on-site. The cleanup is 17 structured in this fashion in such that the cleanup 18 team gets paid the full \$48,000,000 only if the 19 full cleanup is achieved by enzymatic 20 dechlorination. If a full cleanup is not achieved 21 and any of the material has to be capped on site, 22 15 million of the total \$48,000,000 we've 23 restricted for long-term operation and maintenance. 24 We believe this is a more appropriate amount and</p>	<p style="text-align: right;">Page 40</p> <p>1 are asking for support from the community and our 2 request to the EPA and facility to transfer the 3 Allied Paper Site privately and to support the use 4 of alternate -- alternative technology including 5 BioPath's enzymatic dechlorination. We have a 6 template letter of support that we encourage you to 7 modify to reflect your thoughts and words. My team 8 lead, Ann Larums, is here tonight and she can 9 assist in any way coordinating your effort before 10 the deadline for public comment. Thank you very 11 much. 12       MS. RUSSELL: Next we have Chris Young. 13       MR. YOUNG: I think you're going to have 14 to move that up a bit. I think that's almost 15 perfect. My name is Chris Young and I'm the chief 16 technology consultant for BioPath Solutions. I'm 17 also the original developer of the remedial 18 biotechnology of the cleanup of the PCB impacted 19 soil and Allied Paper Landfill Site here in 20 Kalamazoo. 21       I'm a Michigan native. I was born and 22 raised in Midland, I graduated from Central 23 Michigan University. My training is in organic 24 chemistry and I have more than 30 years of</p>
<p style="text-align: right;">Page 39</p> <p>1 shows a further commitment to cleaning up the site. 2       Because of Catskill's experience over the 3 last 20 years, we believe that the site activities, 4 including the BioPath's Solutions enzymatic 5 dechlorination, in accordance with Option D in two 6 to three years, we know that we can do this safely 7 and in full compliance of the Superfund process, 8 and most of our work is in Western Michigan and 9 most of our employees live in and around Kalamazoo. 10 We feel strongly about employing local labor so 11 that the people performing the work share with your 12 desires to complete the work timely and safely. 13       For the team to do this project, we will 14 need the Allied Paper Landfill to become a private 15 Superfund site so that the team can believe the 16 approaches commonly used on Superfund sites, 17 including KL Avenue or most of the other work on 18 the Kalamazoo River. It tends to be substantially 19 less expensive and in recognition of this 20 efficiency, the EPA has recently voiced its support 21 of public/private partnerships that move 22 performance from federally to privately. 23       Again, our priority is to efficiently 24 clean the site and bring it to a full reuse. We</p>	<p style="text-align: right;">Page 41</p> <p>1 experience in the development of insecticides, 2 herbicides, rodenticides, fungicides. In other 3 words, I'm something of an expert in toxic 4 materials. In the late 90s I was involved in 5 research and the development of human gene 6 therapies for the treatment of HIV and cancer. 7 During this research, we studied bacteria collected 8 from hazardous waste sites looking for a link 9 between chemical exposure and impaired human immune 10 response. 11       We discovered that in the presence of 12 these chemical pollutants, including PCBs, the 13 natural soil bacteria cannot secrete a reductive 14 enzyme necessary to break down PCBs into component 15 organics that the soil bacteria can then use as 16 food. This PCB-induced impairment is the reason 17 why PCBs persist in the environment following 18 release. The bacteria is prevented from producing 19 reductive enzymes necessary to break down PCBs. 20 21       Following years of research and testing, 22 we developed an effective process that restores 23 bacterial enzyme production even in the presence of 24 the offending PCBs. The restored soil bacteria</p>

<p style="text-align: right;">Page 42</p> <p>1 rapidly dechlorinates the PCBs, then metabolized,  2 the residual organic component material, the  3 process is turned, enzymatic dechlorination through  4 enhanced bioremediation. The process is  5 restorative, it's safe, it's 100% effective, and  6 its performance is 100% predictable.</p> <p>7 I'm here today to address and lay to rest  8 any concerns that this remedial process has  9 proposed for the cleanup of the PCP impacted soil  10 at Allied Paper Landfill, that it's too new, that  11 it's unproven and therefore unreliable.</p> <p>12 In 1998, the first-generation factor  13 product was the very first biological treatment to  14 achieve residential cleanup goals on a highly  15 persistent insecticide called toxaphene. In 2005,  16 a factor-based product achieved the first ever  17 cleanup of the PCB site in California, achieving  18 residential clean-up goals in a single season.</p> <p>19 In 2014, the factor product demonstrated  20 the remarkable capacity to reduce residual dioxins  21 in soil by 61%, the dioxin reduction never before  22 achieved through bioremediation. This on-site  23 remedial biotechnology has been successfully  24 utilized to clean up dozens of sites impacted by</p>	<p style="text-align: right;">Page 44</p> <p>1 contaminated soil would be trucked off-site. Soil  2 amendments would be incorporated in the soil to  3 enhance the natural bacterial activity and to  4 optimize PCB destruction. Great care will be taken  5 to minimize particulate production and any off-site  6 movement of treatment soils.</p> <p>7 BioPath Solutions' goal on every cleanup  8 is to reduce or eliminate the site's target  9 pollutant so the restored site can be reused and  10 redeveloped without the restrictions for the  11 benefit of the local community.</p> <p>12 There is no logic in accepting a capped  13 polluted site for the Kalamazoo community when  14 common sense dictates that eliminating the site's  15 pollutants is a far superior solution to simply  16 burying and capping the site's pollutants. When  17 the cost to eliminate the site's pollutants is less  18 than capping and long-term monitoring, then the  19 decision for all of the stakeholders should be the  20 easiest decision to make. Thank you.</p> <p>21 MS. RUSSELL: Thank you. Mick Warner is  22 next.</p> <p>23 MR. WARNER: Good evening. My name is  24 Mick Warner and I'm the president of BioPath</p>
<p style="text-align: right;">Page 43</p> <p>1 the most toxic and persistent pollutants.</p> <p>2 In each of the successful cleanups  3 achieved to date, the sample of the sites' water  4 was sent to us for analysis and bench study.  5 Following chemical and pollutant analysis by an  6 independent laboratory, one or more product  7 formulations are modified for the sites' chemistry  8 and its microbiology. The product candidate  9 formulation is then tested at bench to determine  10 which product formulation will achieve the greatest  11 PCB reductions in the shortest period of time.</p> <p>12 And this is the point I'd like to  13 emphasize, that BioPath Solutions will not,  14 absolutely not mobilize in the field unless we are  15 confident that the analytical data confirms that  16 the product formulation selected for the Allied  17 Paper Landfill Site will achieve the cleanup  18 standards. They're in the process of gathering  19 samples down river and have submitted a request to  20 EPA to help us secure samples from the Allied Paper  21 Landfill.</p> <p>22 We've also begun the process to share our  23 proprietary information with EPA. The soil  24 treatment would be performed on-site and no</p>	<p style="text-align: right;">Page 45</p> <p>1 Solutions. We're part of a local team that  2 proposes to clean up the Allied Paper Landfill  3 Site. You've heard from Jim Miller, the president  4 and owner of Catskill, the local contractor; and  5 from Chris Young, the co-developer of the  6 technology. We're confident that our team can  7 achieve total effective removal and that we can do  8 this safely in comparable time as the EPA-proposed  9 plan, using local labor with available funding and  10 for less money.</p> <p>11 Our approach is to transfer the  12 responsibility for the cleanup to our team. We  13 will use local labor to perform the work and then  14 will have demonstrated the ability to biodegrade  15 PCBs and pulp matrix before we mobilize the site.  16 While we appreciate the desire to have the waste  17 removed from the site, we need to accept that that  18 will not happen. Our approach, which is  19 total-effective removal rather than total removal,  20 can happen.</p> <p>21 Over the last five years we have spoken  22 with many of you here and have put considerable  23 effort into understanding the needs of all of the  24 stakeholders. Our approach provides</p>

<p style="text-align: right;">Page 46</p> <p>1 total-effective removal with a contingency to</p> <p>2 consolidate and cap, making EPA's option 2D work</p> <p>3 all of the stakeholders. For the community</p> <p>4 members, there will be no 41-foot tower of waste</p> <p>5 and if there is any capping, there will be</p> <p>6 approximately three times more funding available to</p> <p>7 perform the long-term operation and maintenance.</p> <p>8 Most importantly, we're ready and the</p> <p>9 funding is ready. There is no more waiting. To</p> <p>10 the city and to the county, the site will either be</p> <p>11 fully clean and ready for redevelopment or</p> <p>12 responsibly funded with safeguards to preclude</p> <p>13 Superfund liability. To the down river residents,</p> <p>14 you'll see a demonstration of a technology that</p> <p>15 will work on contamination down river and you'll</p> <p>16 have an extra \$15 million cleanup funds available.</p> <p>17 To the State of Michigan, this option can</p> <p>18 permanently eliminate a Michigan Superfund Site.</p> <p>19 And to the EPA, you'll be the front and</p> <p>20 center in creating a replicable model of</p> <p>21 public/private partnership and advancing the</p> <p>22 technology that can be applied throughout the</p> <p>23 country. You'll have more funds available for down</p> <p>24 river and if necessary, more funds available for</p>	<p style="text-align: right;">Page 48</p> <p>1 Wells next.</p> <p>2 MR. WELLS: My name is Bill Wells, of</p> <p>3 course. I've lived in the City of Kalamazoo all of</p> <p>4 my life. I have lived in this neighborhood most of</p> <p>5 that. I remember the landfill site when I was in</p> <p>6 junior high school with no fences and actually</p> <p>7 playing on the fields. Little bit of history is</p> <p>8 the City of Kalamazoo, by the time that it had</p> <p>9 grown to the 1920s, was just encroaching the</p> <p>10 northern edge of the contaminated site. The city</p> <p>11 has literally grown up around it and it has never</p> <p>12 been able to be used. We have an opportunity to</p> <p>13 really do something that's effective for everyone</p> <p>14 and I'm not just speaking about the residents or</p> <p>15 about the outward community, but also for all of</p> <p>16 the state and federal government and the process of</p> <p>17 seeing this taken care of in a responsible way. We</p> <p>18 as citizens have a responsibility to make sure that</p> <p>19 we have a safe environment to live in.</p> <p>20 Now I raised five children in this</p> <p>21 neighborhood and am very proud of the fact that we</p> <p>22 have got the kind of city that we have, and that we</p> <p>23 need to take care of it. And so I appreciate all</p> <p>24 of the work that the EPA's done in collaborating</p>
<p style="text-align: right;">Page 47</p> <p>1 operation and maintenance at Allied.</p> <p>2 Tonight we're not asking the EPA or the</p> <p>3 public to formally select us as remedy provider,</p> <p>4 but rather to support our request. We asked that</p> <p>5 EPA facilitate the transfer of the Allied Paper</p> <p>6 Landfill Site to a responsible party lead and</p> <p>7 support the use of alternative technologies</p> <p>8 including BioPath's enzymatic dechlorination</p> <p>9 process. Cleanup, not cover up can happen but it's</p> <p>10 not going to happen on its own. We need the</p> <p>11 support of the community to influence EPA to</p> <p>12 support this proposed plan in conjunction with</p> <p>13 option 2D.</p> <p>14 We have a template letter and my</p> <p>15 teammate, Ann Larums, is here and she's back in the</p> <p>16 back. She's available for any of you here to help</p> <p>17 with that request. The community has worked</p> <p>18 tirelessly to find a solution and to achieve total</p> <p>19 cleanup. I believe it's a testament to the power</p> <p>20 within this community to demand and require the</p> <p>21 highest level of care and support from its</p> <p>22 government officials. Together we can achieve</p> <p>23 total effective removal.</p> <p>24 MS. RUSSELL: Thank you. I have Bill</p>	<p style="text-align: right;">Page 49</p> <p>1 with the city and the residents. I think we need</p> <p>2 to continue that collaboration and do what's best</p> <p>3 for the residents in remediating this site. Thank</p> <p>4 you.</p> <p>5 MS. RUSSELL: Thank you. Next is</p> <p>6 Jennifer Clark.</p> <p>7 MS. CLARK: The EPA's proposed</p> <p>8 recommendation for Alternative 2D leaves behind a</p> <p>9 41-foot hill of PCBs in the heart of Kalamazoo.</p> <p>10 The contaminated sediments at Bryant Mill Pond were</p> <p>11 excavated as part of that emergency response action</p> <p>12 and temporarily relocated at the Allied Site. At</p> <p>13 the very least, I ask that the 146,000 cubic yards</p> <p>14 of temporary toxic waste be permanently removed and</p> <p>15 taken to a disposal site that is not in an urban</p> <p>16 area, is not situated on or near aquifers that more</p> <p>17 than 120,000 citizens rely on for drinking water,</p> <p>18 and is not adjacent to a recovering waterway.</p> <p>19 Thank you.</p> <p>20 MS. RUSSELL: Gary Wager.</p> <p>21 MR. WAGER: My name is Gary Wager and I'm</p> <p>22 Executive Director of the Kalamazoo River Cleanup</p> <p>23 Coalition. Our organization was formed in 2007 as</p> <p>24 a response to the EPA-approved plan to bring more</p>

<p style="text-align: right;">Page 50</p> <p>1 toxic waste to the Allied Site. After about two 2 months or so of political activity and public 3 demonstrations, in response to our activity I 4 believe, the EPA changed their mind and went back 5 to the responsible parties to secure the additional 6 funds and disposed of the PCB-contaminated material 7 that they were cleaning up and disposed of it 8 properly in approved landfills.</p> <p>9 Since 2007 -- 2008, we're officially 10 recognized as a tax-exempt organization, 501(c)(3), 11 by the IRS and since that time I'd like to say 12 we've elbowed our way to the negotiating table and 13 I think tonight is an important step in the process 14 of getting something done at the Allied Site. Our 15 board has approved in general terms an agreement 16 with the 2D option. Certainly we're excited about 17 the opportunities that are posed by the technology 18 we've become aware of through BioPath and our 19 letter with comments about the specifics of our 20 request, one of which Jennifer just mentioned about 21 the reducing the height of the remaining pile, will 22 be submitted to the EPA in written comment.</p> <p>23 In closing, I would just like to say 24 thank you for all those of you and to the EPA who</p>	<p style="text-align: right;">Page 52</p> <p>1 feasibility study, I noticed that they have PCB 2 contaminants but it is under four feet of 3 clean-filled material. I just suggest EPA consider 4 under CERCLA Section 101, for remedy of remedial 5 action, to see if it's cost effective or 6 environmentally preferable to relocate those three 7 residential areas and the retirement home; 8 therefore, long-term effects of the monitoring and 9 keeping track of how much PCB might be released and 10 what's happening to those three residences can be 11 kind of controlled.</p> <p>12 My third concern deals with MEPA, the 13 Michigan Environmental Protection Act, which is a 14 lot more substantive than NEPA, and under the four 15 factors from the case, City of Portage versus 16 Kalamazoo County Road Commission, the first factor 17 deals with natural resources that are rare and 18 unique, or endangered, or have historical 19 significance. I would just like the EPA to 20 consider if the Portage Creek falls under one of 21 those categories, and if so, does Alternative 2D in 22 its entirety do the best job of preserving and 23 conserving Portage Creek as a natural resource. Or 24 should the EPA consider Alternative 2D with a</p>
<p style="text-align: right;">Page 51</p> <p>1 have worked over the years. Also, I see a 2 representative from Lansing, from the MDEQ, and 3 Paul, and all of you who are paying attention to 4 this important issue and I think that the activity 5 that our organization and the citizens of Kalamazoo 6 and particularly some of our partners such as the 7 City of Kalamazoo, have improved the compromise 8 that we see now compared to what we would have 9 received had we done nothing back in 2007. Thank 10 you.</p> <p>11 MS. RUSSELL: Gillian Asque.</p> <p>12 MS. ASQUE: I am Gillian Asque. I'm a 13 former Bronco and I've just got four concerns I'd 14 like to address. My first one is with the 15 cost-benefit analysis of Alternative 2D. From my 16 understanding, its effectiveness is still 17 uncertain, so under CERCLA Section 121(b)(1)(f), I 18 suggest that EPA consider the worst-case scenario 19 if the proposed plan were to fail. Therefore, it 20 would give us a true cost-benefit analysis of 21 comparing Alternative 2D to all other alternatives.</p> <p>22 My second concern is with the three 23 residential houses with a retirement property that 24 borders the landfill site. And from the</p>	<p style="text-align: right;">Page 53</p> <p>1 subalternative such as (i), which would also have 2 trenches and a well that would at least help 3 protect the Creek.</p> <p>4 My fourth concern deals with a little bit 5 of clarifying the feasibility study addendum and 6 the proposed plan. And in the proposed plan I 7 noted that the -- with Alternative 2D there will be 8 a lot of restrictive covenants to limit residential 9 use, but from what I've seen under the feasibility 10 study addendum with Alternative 2D, one possible 11 use of the proposed plan is to have a recreational 12 zone, which could include playgrounds. I just 13 urge the EPA to consider how playgrounds would be 14 working out with little children and the 15 restrictive covenants of either using the fences or 16 having more institutional controls of signage so 17 therefore the kids know not to go by the Creek and 18 drink some water, or stay away from that little 19 pipe that is coming out of the ground. And those 20 are my four concerns and thank you so much.</p> <p>21 MS. RUSSELL: I had 12 turned in and 22 there is no name. Anybody want to take ownership 23 of that? Okay, Kris Mbah.</p> <p>24 MR. MBAH: Good try. Mbah. And so I</p>

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1 believe this comment period only is a formality  
2 because you've already made your decisions, and so  
3 I'm wondering how do you actually include people in  
4 this communication process? I'm looking around and  
5 I'm looking at everyone here and it's a pretty  
6 homogeneous group and, of course, this Allied Site  
7 is relatively surrounded with Hispanic community  
8 and more minorities. How are you reaching out to  
9 these minorities and whom are you working with  
10 within our community that actually has  
11 relationships with these minorities and core  
12 communities in order to actually bring them to this  
13 table that, of course, you've already made the  
14 decisions? So I'm wondering, how do you actually  
15 reach out to the community here? Thank you.

16 MS. RUSSELL: Thank you. Next I have  
17 Chris Wahmhoff.

18 MR. WAHMHOF: My name is Chris Wahmhoff.  
19 I live at the end of the street at Bryant, 1407. I  
20 was born in Plainwell, Michigan. Actually, my  
21 childhood fort used to be on the Superfund Site in  
22 Kalamazoo. And they brought the PCBs up here; that  
23 was a basketball court that I played as a kid. I  
24 can tell you that whole process, we never got any

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1 of these warnings. Kids were fishing out of the  
2 river then when they were cleaning up, they didn't  
3 say anything. We were playing basketball and they  
4 didn't say anything then.

5 And I moved up here -- I actually used to  
6 live right next to the Outriders Bike Club. I woke  
7 up and lived in that spot for a year. I didn't  
8 hear a word about this being a Superfund site. I  
9 didn't hear about it being a problem being safety.  
10 I didn't hear anything about it the whole time I  
11 lived there. Now I live here on Bryant and this  
12 doesn't go away. But we've worked with some stuff  
13 from the oil spill that we've already had in this  
14 river. I've worked with the EPA there and I'll  
15 give you guys credit; it wasn't you two.

16 At EPA, and if anybody wants to YouTube  
17 Ward Creek, it was on June 17th, 2013, we found a  
18 company illegally dumping. We told EPA, Region 5,  
19 and nothing ever happened. 2012, EPA and MDEQ said  
20 that the Kalamazoo River was safe for people to go  
21 and swim in. What they didn't bother to tell  
22 anybody, if you want to look up, -- and feel free  
23 to go and prove me wrong -- they said they based  
24 some of the data to say that it's safe for people

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1 on a theoretical basis that the same health effects  
2 for animals would be the same for people.

3 So I know that I have some of the  
4 paperwork on that for me, but I hear a lot of  
5 people thanking the EPA. I hear a lot of people  
6 saying how considerate they are. You guys think --  
7 I want to know, do you think that they're going to  
8 keep your kids safe? Do you really think that this  
9 is about our safety and not about money?

10 Well, here's another one: This one I did  
11 bring a flyer on. We all know what's happening in  
12 Flint. Well, here's some of the documentation that  
13 the EPA knew about this since 2004. So when they  
14 say they're about our safety, I won't take it and  
15 I'm turning my back purposely on them and I don't  
16 care if they can hear me or not. I'm saying this  
17 to all of you. It is our responsibility to not ask  
18 them, to make them do it. I don't know if anybody  
19 else saw that up there but community is ranked No.  
20 9 on the nine people of importance that this is  
21 about.

22 Now I know that BioPath Solutions also  
23 reached out to them and they didn't do it. They're  
24 going to give them the runaround, the bench test;

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1 that's why they're pushing for this. It is our  
2 responsibility to stand up for ourselves. It is  
3 our responsibility to stand up for ourselves. Does  
4 anybody believe this state government or this  
5 federal government is really speaking for us? Do  
6 any of the community members believe any of that?  
7 It's on us.

8 MS. RUSSELL: Next is to Wayne Hampton.

9 MR. HAMPTON: I'm Wayne Hampton and I've  
10 been around these meetings for quite a while. I  
11 want to commend the current leadership of EPA  
12 Region 5 and those in the City of Kalamazoo for  
13 working together to make progress away from the  
14 earlier combative relationship that was essentially  
15 getting nothing done, nothing moved, everything was  
16 stagnant. It looks like we are poised on the  
17 precipice of actually doing something. So far, if  
18 you look at all the PCB amassed in the Kalamazoo  
19 Superfund area of concern, I think somewhere around  
20 1.5 to 2% has been removed or dealt with.

21 But clearly we need to move forward. I  
22 think this suggested decision is the best possible  
23 outcome of the process. I know Mayor Hopewell  
24 wants to see some of this beautiful riverside



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1 property returned to productive use. I know the  
2 community wants to see the barbed-wire or  
3 chain-link fence come down and I, myself, would  
4 like the chance someday to walk or jog or even bike  
5 along Portage Creek; it's actually quite nice  
6 looking. So it would be nice to see this return to  
7 some kind of beneficial use that would augment the  
8 value that we have here in the City of Kalamazoo.

9 Last but not least, I think that the  
10 community has been listened to. I've attended a  
11 lot of meetings and I haven't gone to every one of  
12 them. There was one not that long ago over in the  
13 Hispanic Center next to St. Joseph Church. There  
14 have been efforts to reach out, they've even  
15 offered cookies. So I want to commend those who  
16 have tried to make this a community outreach. I  
17 think they've been listening and, again, I think  
18 this is probably the best deal we're going to get.

19 MS. RUSSELL: Thank you. Next we have  
20 Matt Fletcher.

21 MR. FLETCHER: My name is Matt Fletcher.  
22 I've been -- I think this is a unique partnership  
23 between the city and the EPA. I think it's a --  
24 it's never been done before. The EPA, you know,

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1 God knows it's not perfect, but there's places, I  
2 don't know, 500 -- 1000 miles south of here and  
3 they just like had to do without any environmental  
4 regulations. And so I'm excited about this because  
5 this is a different process that the EPA -- instead  
6 of just having a community and saying this is the  
7 way it's going to be. I know Marc Hatton and Bruce  
8 Merchant and many of the other city leaders who  
9 spent, you know, hundreds of hours with the EPA,  
10 and like I said, I think this is a really unique  
11 opportunity.

12 I'm concerned about moving 110,000 dump  
13 trucks full of PCBs through the neighborhoods over  
14 three or five years. I live -- you know, I own  
15 property on West Maple Street and Emerson, which is  
16 just a quarter-of-a-mile away from here, and I can  
17 only imagine, you know, a part of that -- you know,  
18 this neighborhood and not Edison; it's just a  
19 rock's throw over there to the south side  
20 neighborhood.

21 But I'd like to give this to the -- a  
22 chance. Regarding BioPath, I had an opportunity to  
23 listen to -- about an hour and 45 minutes, I'm a  
24 member of the East -- EEC with Chris, and listened

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1 to them and it's a really exciting technology.  
2 When -- one of the questions that was asked last  
3 night, I just said how -- what is the largest PCB  
4 site you've done before and it was in California;  
5 it was 30,000 cubic yards. And we have 1.6  
6 millions cubic yards.

7 I really hope -- I'm cheering for BioPath  
8 down the line, but I don't know if right now if the  
9 timing is right. I don't see any reason why this  
10 couldn't be re-examined by the city or the EPA in  
11 five years. If there was a technology that proved  
12 -- proves to work -- because there hasn't been any  
13 academic studies yet. I know that they have  
14 independent studies but there hasn't been any  
15 academic studies; it's a relatively new technology.

16 And so this might be the way to go five  
17 or ten years from now, but I think right now the 2D  
18 compromise -- that's what I'm really excited about,  
19 because I think that's what I'm excited about. So  
20 that's it, thank you.

21 MS. RUSSELL: Thank you. Next is Dayle  
22 Harrison.

23 MR. HARRISON: Mr. Berkoff, I want to  
24 thank you for hosting the meeting today and the

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1 EPA. My name is Dayle Harrison and I'm president  
2 of the Kalamazoo River Protection Association.  
3 Back in 1978, myself and about four other board  
4 members of the Kalamazoo River Protection  
5 Association met at the Allied Paper Site with the  
6 media trying to get them to approach and get that  
7 Portage Creek Site cleaned up.

8 I recognize it's a long time ago, some of  
9 you folks weren't even born then, but a few of you  
10 were probably there. And I want to give you a  
11 little history of what's happened since then, not  
12 enough. Way not enough. Fortunately in the  
13 mid-1990s, about 1998, '97 there was a  
14 time-critical removal action on Portage Creek.  
15 That has been the most upstream, highest level of  
16 PCB contamination found throughout the Superfund  
17 site.

18 And after several years and about  
19 \$25,000,000, that site was pretty much cleaned up;  
20 it was stabilized and at that time there was only a  
21 very small, almost not even detectable level of  
22 PCBs entering Portage Creek and downstream from the  
23 Kalamazoo River. There were still issues with  
24 Portage Creek, but the Allied site was pretty much

<p style="text-align: right;">Page 62</p> <p>1 safe and environmentally protected.</p> <p>2 One of the issues here certainly close to</p> <p>3 my heart, is the issue of aesthetics versus</p> <p>4 environmental protection. I wrote to Mr. Berkoff</p> <p>5 back in 2010 saying that I've reviewed then the</p> <p>6 feasibility study that looked at an Alternative 2B,</p> <p>7 which was a consolidation of materials at the</p> <p>8 existing facility.</p> <p>9 My thought was there was strong agreement</p> <p>10 with any data for that, there was environmental</p> <p>11 protection, protective of human health and the</p> <p>12 environment. It was cost effective back then; it</p> <p>13 was called 2B. Back then it was \$41,000,000, now</p> <p>14 today it's \$43,000,000. So it's my firm belief</p> <p>15 that action is to protect human health and</p> <p>16 environment at the site and I'm not sure that EPA</p> <p>17 concurs with that.</p> <p>18 Further evidence is, is that in the</p> <p>19 bankruptcy proceedings, EPA estimated and gave</p> <p>20 themselves room to negotiate how much it would cost</p> <p>21 them to remediate the Allied Paper Site. They came</p> <p>22 up with a figure of \$53,000,000, which was more</p> <p>23 than they knew that they thought would be necessary</p> <p>24 at the time to provide a certain safeguard. And</p>	<p style="text-align: right;">Page 64</p> <p>1 also entitled to have a sound solution to the</p> <p>2 Allied facilities, so if we can do it with</p> <p>3 \$43,00,000 or less, then why would we want to waste</p> <p>4 \$20,000,000 to satisfy a condition that is an</p> <p>5 environmental risk.</p> <p>6 Whenever the EPA steps out of bounds and</p> <p>7 gets into its political arena, we endanger future</p> <p>8 cleanups downstream, not just the Kalamazoo River</p> <p>9 but in sites throughout the country. There isn't</p> <p>10 anyone here when they don't look inside and look in</p> <p>11 the mirror and look inside of them politically in</p> <p>12 the last seven years or so and this is exactly</p> <p>13 what's transpired.</p> <p>14 We had a solution, EPA bowed to the</p> <p>15 community, which I think is a good idea, but if</p> <p>16 it's just added studies and producing more</p> <p>17 projects, and it doesn't improve the environmental</p> <p>18 protection or human health protection and that's</p> <p>19 not your job, that's somebody else's job. Your job</p> <p>20 is to look at CERCLA and provide environmental</p> <p>21 protection, which you've done.</p> <p>22 You've made that decision a couple of</p> <p>23 times five years ago or more and here we are today</p> <p>24 in a brand-new ballgame. How are we going to deal</p>
<p style="text-align: right;">Page 63</p> <p>1 that produced documents from the Department of</p> <p>2 Justice, the bankruptcy courts ordered. So that</p> <p>3 left pretty much a safe amount dedicated to lower</p> <p>4 Kalamazoo River.</p> <p>5 It was my understanding, and I think it's</p> <p>6 still true today, that if they don't spend the</p> <p>7 \$53,000,000 at the Allied Paper Site, that money</p> <p>8 will be used to go downstream for remediation. Now</p> <p>9 everyone in this room I think should know by now</p> <p>10 that the health risk to fish and wildlife, we all</p> <p>11 know, are downstream. So what we're looking at is,</p> <p>12 will EPA compromise its position, which it's held</p> <p>13 firmly for so long and stay with the 2B plan, or</p> <p>14 will they go with something that's more</p> <p>15 aesthetically pleasing to the community. This</p> <p>16 should have been done a long time ago. This could</p> <p>17 have been done in 2005 or even 2010, but it hasn't</p> <p>18 happened yet today.</p> <p>19 So let's get back to this issue of money.</p> <p>20 There isn't a lot of money for the Kalamazoo River</p> <p>21 but we have a vested interest in that bankruptcy</p> <p>22 money just like the people in Allegan County.</p> <p>23 We're third-party beneficiaries, we are entitled to</p> <p>24 benefit from the bargaining the EPA made. We're</p>	<p style="text-align: right;">Page 65</p> <p>1 with this, because they are going to look at</p> <p>2 \$20,000,000, which is money to be used for</p> <p>3 downstream efforts and I would be really shocked if</p> <p>4 they --</p> <p>5 MS. RUSSELL: You're at five minutes.</p> <p>6 MR. HARRISON: I have five minutes left?</p> <p>7 MS. RUSSELL: No, you've had five</p> <p>8 minutes.</p> <p>9 MR. HARRISON: Well, I appreciate your</p> <p>10 position. You know, I've represented our group</p> <p>11 that's been on this site for almost four decades</p> <p>12 now. We've been intimately involved with the</p> <p>13 issues in all the fronts. We've been to thousands</p> <p>14 of meetings over that 40-year period. So I</p> <p>15 encourage the EPA to discard the preferred</p> <p>16 alternative and go back to the 2B alternative,</p> <p>17 which is more than adequate to protect the</p> <p>18 environment and public health and I'll be</p> <p>19 forwarding other comments before the deadline.</p> <p>20 Thank you very much.</p> <p>21 MS. RUSSELL: George Magas.</p> <p>22 MR. MAGAS: Hello, I'm George Magas.</p> <p>23 Well, if we only have a certain amount of money and</p> <p>24 if you're taking that money and spending it</p>

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1 downstream, it's kind of like it's earmarked for us  
2 and when you write a check for a non-profit and you  
3 say you want it used for a certain item, they can  
4 go back at you if you don't use it for the item  
5 that you address it for. So we've lost that money  
6 to use at this site, you know what I'm saying? So  
7 it needs to go there.

8 And the other thing is, you probably  
9 based a lot of your trucking this off to another  
10 site on oil prices of three and 50 a gallon and now  
11 it's under \$2.00 a gallon, so if you rework those  
12 numbers that price is going to come down, so we  
13 could possibly remove the PCBs offsite.

14 MS. RUSSELL: Thank you.

15 MR. BERKOFF: Thank you.

16 MS. RUSSELL: I'm out of cards here.  
17 That's not precluding someone from grabbing one if  
18 they so desired. I don't see anyone moving in that  
19 direction, so I'm just going to go ahead and close  
20 this portion of the comment period. Please note  
21 that you can submit your comments, postmark those,  
22 mail them, submit them online. Those need to be  
23 postmarked by December 1, submitted by December 1,  
24 and those will be submitted into the public

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1 comments for this remedy. So with that, on behalf  
2 of Region 5 EPA, thank you all for coming out and  
3 spending your time with us this evening. We value  
4 that time and effort you made to come out and talk  
5 about this project. And have a good evening and  
6 travel home safely. Thank you.

7 (The hearing is concluded at 8:15 p.m.)  
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## CERTIFICATE


7 STATE OF MICHIGAN  
8 COUNTY OF BERRIEN

10 I, KRISTI AUBREY, a Certified Stenomask  
11 Reporter and Notary Public in and for the State of  
12 Michigan, do hereby certify that the foregoing  
13 transcript taken on November 19, 2015, is true and  
14 accurate to the best of my knowledge, skill, and  
15 ability.

16 IN WITNESS WHEREOF, I have hereunto set my  
17 hand this 15th day of December, 2015.

20 SUBSCRIBED AND SWORN TO

21 before me this 15 day  
22 of December, A.D., 2015.

22 

23 NOTARY PUBLIC

24

*Kristi Aubrey*  
KRISTI AUBREY, CSMR-9019

My commission expires:  
May 20, 2022

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